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NO. 30.



OUR HOME, OUR COUNTRY, AND OUR BROTHER MAN.

MANAGEMENT OF WOOD-LOTS.

It may seem strange to some of our readers that we should have to say "out west" that we "up easters" in the "woods of Maine" should begin to take any thought or trouble about wood-lots.

The fact is, the time has come in too many parts of the State, that a scarcity of fuel and lumber compels many people to enquire into the best mode of managing wood-lots. Had this enquiry received attention fifty years ago, the State of Maine would now have been worth millions more than it now is.

The frontier portions of the State, where the forest has just been broken into, ought to take a practical lesson from the older portions and husband their wood with care. We would say to them, destroy no more of it than is necessary to give you tillage for your bread and pasture for your flocks and herds. Do not let the fire run over and destroy it if you can possibly help it. In the older portions, as we have said above, necessity starts the enquiry. How shall we manage our wood-lands to the best advantage? Farmers seek to be divided in their opinions in this matter. Some think it best, when cutting every winter what they wish for their own use or to sell, to cut the ground over clean, and then leave it to grow up again, each year cutting a portion as it may be wanted. Others prefer to glean out the older and more decayed trees, and to thin out where the growth is pretty thick, and let the younger and more thrifty trees stand and grow for future use. With-out pretending to much experience in this matter, we should decide that, under certain circumstances, both are right. For instance, where the whole of the growth is cut off clean, it will take a number of years for it to start up and grow to a sufficient size to cut again. If the farmer has a tract of wood sufficiently large to keep in a supply of fuel by going over his lot in this way, we think it a good method; for, if he lives to come round to the portion first cleared, he finds a vigorous, healthy growth of sound wood, and the lot may be said to have a valuable annual growth. On the other hand, if the farmer has not a large tract, and by cutting a certain portion off clean every year, he shall have gone over his lot in a few years, and coming round in rotation to the first cut lot, finds that there has not been time sufficient for its full growth since he first passed the axe over it, he will be in want of fuel. In such case it would have been better to have gleaned out from time to time the older and decaying trees, and pruned up and thinned out the younger, and assisted their growth by taking away under brush as would choke, and kept out cattle that would browse the shoots. We have seen small wood-lots managed in this way by careful men, that supplied the wood for the family beyond the expectation of all.

As it regards the time necessary for a crop of wood to grow—that is to say, for a wood-lot that has been cleared, to grow up again, no observations or experiments have to our knowledge been made in Maine. Colman, in his report of the agriculture of Massachusetts, has taken this subject into consideration and given many valuable facts, which we copy from below. It has been observed by some that forest trees grow faster in Massachusetts than in Maine, and that therefore allowance must be made between the two latitudes in regard to their statements. As far as our observations extend, some kinds of trees, such as the oak and pitch-pine, grow faster in Massachusetts; while other kinds, as the rock maple, yellow birch and beech, grow faster in Maine.

Colman observes that he found in Plymouth and Norfolk counties, in which much land had been thrown out of cultivation and devoted to wood, that it was a prevalent conviction that in general it might be cut over once in twenty years, and yield in that time twenty cords per acre. A Mr. Blanchard in that section gave it as his opinion that a thin and exhausted soil would give twenty-five cords of wood per acre in twenty-five years, and that good land in thirty years would give fifty cords to the acre. Elihu Loring, of Hingham, states that oak wood may be cut once in fifteen or twenty years, and that he obtains thirty cords of wood to the acre. Elijah Atherton, of Stoughton, Norfolk Co., informed Mr. C. that wood-land, with proper care, will produce twenty cords of wood per acre in twenty years, at which time it is generally fit to cut. John Welles, a well known agriculturist, is of opinion that as a general principle, it is considered by many, that in cutting off a wood-lot, a period not far from 30 years may be advantageously allowed before the regrowth should be again returned to. A period of little over 30 years is allowed by some, prompted often by a desire to avail themselves of the capital. He also observes that the growth of an apple tree is from 1-4 to 1-2 inches in circumference in a year. An elm, in 20 years, gave 1-3-4 inch (average growth). An ash, in 30 years, gave 1-5-8 inch; these trees standing alone. In some instances, where trees have stood from half to three fourths of a century, their growth has been found to be 1-1-2 inch per year.

We give these extracts above from Colman's report, because they give more information upon this subject in a territory the nearest to us of any where we know of any experiment and observation on these matters being made, and in a region where many of us are acquainted.

We should be pleased to receive communi-

cations from any of our readers in Maine, who have paid attention to the subject of woodlands. It is one getting to be of great importance in the older sections of the State, and should by no means be neglected in those parts more recently settled.

ARE DISEASES OF FRUIT TREES HEREDITARY?

We are aware that there has long been an opinion, both well founded we cannot say, that grafts from fruit trees partake of the nature of the parent stock, and therefore suffer the diseases incident to that stock, though many miles distant from it. This idea was either started or preached by Mr. Knight, who in his lifetime was one of the greatest horticulturists in England. It has had many advocates, who bring forward many circumstances strongly in its favor, but we believe it has become somewhat obsolete now and not much faith put in it.

Some years ago, a Mr. Leliur, a French gentleman, wrote a work on fruit and other trees, wherein he held forth the idea that certain diseases in the peach tree, called white leaf, was hereditary—that plants raised from the fruit or kernel of such trees were sure to suffer in the same way, and would also communicate the disease to grafts if inserted into them. A friend of ours, who has paid some attention to fruit trees, thinks he has suffered by planting seed from diseased trees. Perhaps if his trees are diseased, the mischief arose from planting diseased seed. It is a fact that young plants will not flourish well that are started from diseased or imperfect seed. One reason of this is the following: For a short time the young plant draws nourishment from the seed itself, and if that nourishment be not good the plant must suffer.

LIFTING OUT ROCKS.

To persons who are clearing their fields of heavy rocks, and have not a sufficient supply of ox and man power to grapple with everything, the following mode—old to some, but new to many—may be useful:

First have what are called shears, to raise above them, with a staple, to which a double tackle may be attached. Then drill a hole, say an inch and a half in diameter, and three inches deep in the top of the rock, then have a bolt with an eye to it which will fit the hole snugly, and drive it in—then hitch the hook of the lower tackle into it and pull away. If you have a windlass fixed to one side of your shears with a fall to it around which the rope shall pass, and with a crank to turn it, you will operate much easier. The iron bolt will stick so as to enable you to lift a rock weighing three or four tons, and when raised, by giving it a side rap, it will be detached. By having suitable fixtures of this kind strongly made, heavy rocks may be lifted out of their beds, or placed in situations where wanted, with comparative ease.

NORMANDY CATTLE—QUEST. Sometime during the years 1817 or '18, the Massachusetts Agricultural Society imported a bull and two cows from Normandy. Their subsequent history we have not been able to learn.—What became of them? Had they any peculiarities that rendered them, or a cross with them, more valuable than our native breed? Will our Bro. Buckminster, of the Ploughman, inquire into their history, and let us know the results through his columns?

[For the Maine Farmer.]

CULTIVATE WINTER WHEAT.

MR. HOLMES.—The quantity of wheat that is brought from the Western States through Buffalo, is very great. There has been so little attention paid to the raising of breadstuffs among us, although the seasons have been good for Indian corn, rye and barley, which will well sustain life, that should there be only a scarcity in the Western States, it would create quite a famine in Maine, and be severely felt all over the world. I think there has not been time since we have had open winters, in which various kinds of winter wheat might not have been raised. To do this, throw the land into beds in the direction that the land may be drained. Plow it in beds, or lack furrow, say twice. Sow early, if the weather will permit. Eat off the wheat in the fall by light, young cattle; and in the spring, when the snow begins to melt in the day time, fuddle your stock on the wheat, and let them make holes through the snow to let in air. Red wheat, of the summer kind, sowed late, has most generally escaped the grain worm and rust. I was a farmer in this State nearly forty years, and I failed but one year to raise my breadstuff and eat it when it was raised. I never had but one barrel of flour in my house brought from other States. In 1817 I sold my wheat for sowing and purchased a barrel of flour. I then had more breadstuff than I wanted, and supplied many families with very considerable quantities. The above may in some good degree show what danger we are in of a partial famine, and, I ask, is that independence and good economy? A. B.

Winthrop, July, 1848.

[For the Maine Farmer.]

PEAT—A FEW HINTS.

MR. HOLMES.—Knowing your wish to give as well as elicit information on any subject relating to agriculture, as well as the mechanic arts, I would call your attention to the article of peat or turf, as useful for manure or fuel. You are well aware that ores of iron, of the various kinds, abound in many parts of this State, and are comparatively of little value, from the want of coal to smelt them. Forests are too soon consumed to warrant very extensive establishments for the manufacture of iron with wood coal. It is almost certain that large deposits or growths of peat may be found in the swamps and bogs that must abound in a State where there is such a vast amount of water power as there is in Maine. It is well known that it has for some years been made use of in England for the smelting of iron, and that, too, at a great saving over

the use of coal. What has been done there, may be done here with the same means. At Wayne we have an extensive scythe manufactory, under the care of R. B. Dunn, Esq., who is at a very heavy expense for transportation of coal from Pennsylvania, when there is but little doubt that upon the Bowles' farm, within two miles of his forges, there is turf that could be substituted for coal. Then again on the borders of the Damariscotta pond, there are large deposits of it. At the outlet of this pond there is a most magnificent water power, and in Woolwich, near by, an abundance of iron ore. With such materials and appliances at hand, what should prevent the enterprising ship builders of Nolleboro' and Newcastle from making their thousands of tons of iron they annually use, and manufacturing all their chains, anchors, iron knees, &c. These suggestions, Mr. Editor, are thrown out for consideration. My only object is to draw attention to the resources of the State, with a view to their development by those who have the skill and the means. Augusta, July, 1848.

NAUTICS.

[For the Maine Farmer.]

THE BEE CULTURE.

MR. EDITOR.—I have read in your last number an article from the Newark Daily Advertiser, entitled "The Bee Culture," the writer of which speaks of an ingenious bee culturist who has made an estimate of the net profit from four swarms of bees for the term of ten years, viz, \$50,000. He says by commencing with four swarms, and they sending out a swarm yearly, the second year there will be eight, the third year, sixteen, the fourth year, thirty-two, and so on till the end of ten years, when there will be nine thousand bee hives. So far as he has calculated is correct up to the fourth year, but I do not see how he makes out nine thousand at the expiration of the term. Of course there will be the fifth year, sixty-four, the sixth year, one hundred and twenty-eight, the seventh year, two hundred and fifty-six, the eighth year, five hundred and twelve, the ninth year, one thousand and twenty-four, the tenth year, two thousand and forty-eight.

He also says a swarm will furnish yearly at least five dollars worth of honey. In "these parts" we should like very much to know what sort of a hive he uses to obtain that amount and save his bees. It must be of a kind we here know nothing about, or else he sells his honey for three times what we get for it in this market, viz, from ten to twelve and a half cents per pound. From the most perfect hive we have, and we have as good here as there are in the country, we can draw only about twelve pounds. To get five dollars worth, we should have to draw from forty to fifty pounds. If we take more than the twelve pounds, we run the risk of losing our bees by starvation during the winter. In some seasons there could probably be more taken with less risk.

Now, if, as he says, you can realize five dollars worth of honey yearly from each hive, and each one yearly sends forth a swarm and you save them, and they all "winter" and do well during the ten years, and in that time you gain nine thousand hives from four, then perhaps the profits would amount to something near what he has named—\$50,000.

No doubt he is an ingenious bee culturist, and his ingenuity develops itself strikingly in getting up a bee speculation on paper, and still more in figuring out in ten years nine thousand bee hives out of four. How he does it, and by what rule, I do not know—at any rate, he is "some" at "ciphering." The price for the nine thousand is \$3,000 each, making \$27,000; \$5,000 each for honey, \$45,000; whole amount, \$72,000. Cost of hives, \$10,000; labor and care, \$14,000. Net profit, \$58,000. If this bee culturist will take charge of four hives of bees for me for ten years, or send a hand who knows as much about the business as he does, and warrant the net profits to be one half of what he has named, I will give him \$10,000, provided he will take bee hives as security for the payment, besides paying him the \$12,000 for labor and care. I should make in that time \$15,000, or fifteen hundred dollars per year, by the speculation. No one doubts the profit of keeping bees who has had any experience in the business. If there is a profit in keeping one hive, there is in keeping one hundred, provided the location is fit, as much depends upon that, and of a proper management of them, and suitable hives. But I think the above estimate is much out of the way, although this is only my humble opinion, and I may be mistaken. As myself and many of my neighbors are interested in the keeping of bees, I hope to hear more of them, from time to time, through the medium of your useful paper. A. B.

Diamond, July 15, 1848.

CHEAP CEMENT. We have published the following recipe several times—but, in answer to an enquiry, give it another insertion. For covering outside of buildings, &c., mix two parts of sifted wood ashes, one of fine sand, and three of clay. To these add oil sufficient to make it of the consistency required, and apply it.

We have never had occasion to use it, but have been informed that it is both cheap and durable.

THE COW—HER DISEASES AND MANAGEMENT—No. II.

Among the diseases of the cow requiring the greatest attention in their treatment, are inflammations, which are violent in their attacks, rapid in progress, and must be opposed by the most powerful means of relief; otherwise they will frequently result in the death of the animal. A disease of this class, which requires immediate attention is

Inflammation of the Brain, called also "frenzy" or the "slough." The cause of this malady may proceed from the suppression of natural evacuations, from exposure to extreme heat and cold, injuries of the brain, &c. Unless taken at the commencement, it is apt to terminate in suppuration of the brain, and not infrequently in mortification.

The prevailing symptoms of the disease consist of a constant watching and raving, the breath is slow, the countenance appears much disturbed, and all the marks of madness are conspicuous in the wild look and fierceness of the animal. On examining the pulse, at the temporal artery, the beating is strong and rapid, and sometimes irregular. Along with this, may be observed a peculiar redness of the eyes, the urine is always highly colored, and he is occasionally seized with profuse perspiration and convulsed motions, when agitated or disturbed.

In the treatment of this disease, blood-letting is the principal and only remedy to be depended on. Hence large and repeated bleedings should be immediately had recourse to, as soon as the malady shows itself, the blood should also be taken from a large orifice, if a vein be preferred; but the best situation for drawing the blood in this case, is the temporal artery.

Next to bleeding, purging will be found a useful remedy, in order to procure a revulsion of the blood from the head; and the doses for this purpose should be strong, and speedy in their operation; thus:

Take Epsom salts (sulphate of magnesia), 3 lbs.; nitre (saltpetre), 14 oz., and mix for one dose; to be given in two quarts of this gruel and a pint of molasses.

When this has operated, and bleeding has taken place to a sufficient extent, small doses of nitre and camphor, prepared after the first formula prescribed for a cold, [See Farmer of the 13th instant] and in general the same diet and after treatment apply here as directed for fevers. [See Farmer of the 20th.]

Inflammation of the Lungs.—This disorder, sometimes known by the names of "fog sickness," and "rising of the lights," is a disease to which cattle are very subject. Its principal cause is whatever occasions obstructed perspiration. Hence it is brought on by dry, cold winds; also from drinking too much cold water when over-heated, or in being kept too long from water. It is also frequently occasioned by being turned out into a pasture that contains much cold dew, or is covered with hoar frost.

The disease is known by great difficulty of breathing, attended with a cough, or hoarse; the cow opens her mouth wide; the tongue is thrust out; the nose and mouth discharge a rosy sputum; the eyes appear dull and heavy; the pulse hard; and she is unwilling to lie down. When moved, she appears uneasy, and in giving her drink, it seems as though she would be choked in attempting to take it; she is also very costive; the external surface of her skin feels cold, particularly on the legs, ears, and at the roots of the horns; and, as the disease progresses, she becomes very restless and often is unmanageable.

Bleeding, as in the preceding case, is the principal remedy. The animal should be bled freely, and from a large orifice; as a timely bleeding will often do much to check the disease at its commencement. After this, the best practice is, to peg the cow in the dewlap with the following mixture:

Corrosive sublimate (bi-chloride of mercury), 1 drachm; euphorbium, 4 drachms; hog's lard, 1 oz.

DUTCH HUSBANDRY.

The foundation upon which the agriculture of Belgium rests, is the cultivation of clover, which seems indigenous, since none of the most ancient records notice its introduction, but speak of it as familiarly as of hay or oats. It is probably from this country, that the plant in question has been, though but recently, slowly, and hitherto only partially, introduced amongst the farmers of Germany, France and Great Britain. The clover in Flanders is sown in every sort of grain, in wheat, rye and winter barley, in the spring of the year, when the blades of those plants have acquired a growth of three or four inches; and with oats or summer barley at the same time with flax; and in general, the crops grown between those plants are more luxuriant than when sown with the cereals. It frequently happens, when sown with flax, that clover yields a heavy crop a few months after it is sown; two still more abundant crops the next year, and sometimes even three; and if, as it occasionally happens, it be sown to stand another year, it will yield one heavy crop, and afterwards good pasturage for cattle, till it is plowed up to receive the seed of wheat, which usually follows it. The original strength of the plants which yield such abundant nourishment, is undoubtedly due to the care taken in pulverizing the soil by frequent plowings and harrowings, to the careful irrigation of all weeds, and to the copious stores of manure laid on the ground, and its complete amalgamation with the soil; but the successive harvests which the plants yield are attributed, and with apparent probability, to the top dressings which are bestowed upon them. The top dressings administered to the young clover consist either of rotten yard-dung, lime, pigeon's dung, coal, or native turp-ashes, and are laid on as soon as the plants begin to extend themselves over the ground. Sometimes the plants are refreshed with liquid manure.

These manures, though administered to the clovers, as far as they can be obtained, are found far inferior in powers of fertility to that substance which is most generally used, and the effects of which, form the theme of the praises bestowed by all who have witnessed the Belgian husbandry. The turf ashes of Holland are sown by the hand on the clovers, in quantities varying from eighteen to twenty bushels to an English acre.

This small quantity produces a most surprising and almost magical effect. Within a few weeks after it is sown, a field where none, or but slight straggling plants were to be seen, becomes covered with a most abundant herbage. The parts of a field sown with these ashes, at the first mowing, show their efficacy in the most striking manner; the clover being frequently a foot higher on such parts, than on those where its sowing has been omitted. These ashes are found superior in efficacy to such as are made from the turf commonly used for fuel in Flanders, inasmuch that one-third of the quantity is deemed sufficient to afford a great productivity.

These ashes are brought from Holland by the canals to Brussels, whence they are conveyed by land carriage to the different farms where they are applied. Long practice has so convinced the Flemish farmers of their benefit, that a common proverb in the patois of the country, may be thus translated: "He that buys ashes for clover pays nothing, but he who does it not, pays double." They are frequently fetched from the canal by persons who have to carry them forty, or even fifty miles by land.

The abundance of the clover produced from the soil of Flanders, enables the cultivator to maintain a great number of cattle, principally cows, the dung of which is managed with an attention and care which are highly worthy of imitation, and contributes to maintain in a high state of fertility that soil which yields the most exhausting crops.

"The farmers," says the Abbe Mann, "supply the want of straw in the following manner: The peat or sods which are cut from the bogs, are placed in the stables and cow-stalls as litter for the cattle. The ground under them is dug to a certain depth, so as to admit a considerable quantity of these peat sods, and fresh ones are added as the feet of the cattle tread them down into less compact masses. These compose so many beds of manure, thoroughly impregnated with the urine and dung of the cattle. This mixture produces a compost of excellent quality for fertilizing ground where corn is to be sown."

[Encyclopedia Britannica.]

A NEW CRAFT.

A singular looking combination of wood and iron, is now in progress of construction at the dock just below the new Railroad Depot. It is evidently intended for running in the water, but by what name to call it, is a matter of difficulty to decide. The superstructure rests upon two floats or trunks, placed 30 feet apart, which are 80 feet in length, 3 feet wide, and 4 deep. Upon these floats iron posts 7 feet high are placed, and securely strengthened and braced across from one side to the other, making the lower part look like lattice work. Upon these rests the deck, 55 feet in length by 20 feet wide.

LABOR.

BY EDWARD G. AUBOTT.

Labor, labor—honest labor—
Labor keeps me well and strong;
Labor gives me food and raiment,
Labor, too, inspires my song!

Labor keeps me ever merry—
Cheerful labor is but play;
Labor wrestles with my sorrow,
Labor driveth tears away.

Labor makes me greet the morning
In the glorious hour of dawn,
And I see the hills and valleys
Put their golden garments on.

Labor brings an eye of sobriety,
When my hands their toil forgo,
And across my heart in silence
Cherished streams of memory flow.

Labor curtains night with gladness,
Giveth rest and happy dreams;
And the sleep that follows labor
With a mystic pleasure teems.

Labor ever freely giveth
Lustrous vigor to the mind;
Shedding o'er it sunlight glory,
New ideas I daily find.

Labor brings me all I need—
While I work I need not borrow—
Hands are toiling for to-day,
Mind is working for to-morrow.

Labor's tools make sweetest music,
As their busy echoes ring;
Loom, and wheel, and saw, and ever
There's a merry song to sing.

"Labor—Labor!" cryeth Nature,
"Labor!" sing the wheels of Time,
Earth and sky and ocean chime,
"Labor—Labor!"—ever be thrice.

Labor, labor while ye can;
'Tis the Iron Age of Labor,
Labor only makes the man!

KILLING WIRE GRASS OR WITCH GRASS.

Farmers and gardeners daily complain that it is impossible to kill this grass when it is once rooted in the ground. Some assert that sorrel cannot be killed till it is dried in an oven. So we hear complaints of the white seed (the ox-eye daisy) and it is gravely asserted that there is no rooting out after it has once got into the soil. And we have a class of farmers who fear to try buckwheat lest it might become a permanent grain and yield an annual harvest without tillage, and against the will of the lord of the soil!

Wire grass is not easily killed when it has taken deep root. We have never found any vegetable so tenacious of life as this. It is a most remarkable root, so pointed at the fore end as to prick the finger like a pin. These roots hesitate not to wend their way through the centre of a solid potato growing in the field. We have had a number of potatoes brought to this office with a root of the wire grass that had grown quite through the potato and was still advancing on. And a young peach tree was brought us within a few weeks, through the centre of whose trunk a root of wire grass found its way, not apparently much fatigued by boring through the solid wood.

Wire grass (with grass) may be put to death by a proper course of tillage. Now is a good time to give it a weeding in gardens and in corn fields. It should not be buried, like common weeds, for its long and pointed roots shoot through the soil very soon and take breath above the surface before the roots die. Hoes are the best instruments to kill it, chopping the roots fine and exposing the whole on the surface. In dry weather the roots perish very soon when they are chopped up.

Ploughing just before winter we find to be an excellent practice. Our readers had a hint of this last fall, and now we tell them confidently that ploughing and exposing the roots in November is good. We have found the benefit of it in our own field. [Ploughman.]

BUTTER MAKING.

After reading the interesting article on "Butter Making" in your last number, I took my pen to remark upon, and perhaps criticize it just a very little; but it is a subject of such never-ending dispute, that I concluded I had best let it alone. I will only say that I never wash my butter, as I think it deprives it of its fine flavor. If it is too soft to work, when taken out of the churn, it may possibly be necessary to plunge the lump into cold water in order to harden it, but I should prefer any other expedient. I would sink the butter tubs, or buckets (I use tin altogether) in the spring; or hang them, by ropes, down the well, to the surface of the water. But, instead of my own remarks, I will give you an amusing occurrence, quite too good to be lost, that happened some summers ago, in Philadelphia, where they prize themselves, not without good reason, on their delicious butter.

A lady from New Orleans was on a visit to a friend whose husband loved the good things of this life so well, that he never trusted any one to market for him, and prided himself particularly on his choice of butter. He had frequently told her as an inducement to make this northern visit, that he would regale her with what she had never tasted—fresh butter. For several days, while at breakfast, he asked her if she had ever, even in her dreams, eaten such butter, so firm, so fresh, so delicious; and always received the same answer, that it was very good, but certainly not what she could call fresh butter. At length his good humor gave way, and fairly out of patience, he said one day, "I lived for twelve years in New Orleans, and never tasted an ounce of palatable butter—it was fit only to grease cart wheels with; and for you, accustomed to nothing better than such vile stuff, to pretend not to like this is perfectly absurd." "I did not say I did not like it," said William. "I said the lady, very pleasantly, 'but it does seem very odd to hear you call it fresh butter, when the only fault I can point out is, that it has too much salt for my taste!'" E. S.

[American Agriculturist.]

INFLUENCE OF AIR IN MODIFYING THE HEALTH OF ANIMALS.

Some idea of the immense consumption of oxygen by animals, may be formed by taking the following computation by Bousingault: An adult man consumes 19.9 oz. carbon, daily, in his food, and requires 37 oz. oxygen for its conversion into carbonic acid gas. A horse consumes 97 1-2 oz. (more than 8 lbs. Troy) of carbon in 24 hours, and this requires 13 lbs. 3 1-2 oz. oxygen for the same purpose; while a cow consumes 69.8 oz. carbon (nearly 6 lbs. Troy,) which calls for 11 lbs. 10 1-2 oz. oxygen.

From this circumstance alone, we see the necessity of ventilation in places where animals are kept; and the danger that results from crowding them together is heightened by the excretions being allowed to accumulate and to throw off their pestilential gases, which are necessarily evolved by decomposing bodies. Hence, in ill-ventilated stables we meet with the compounds of hydrogen, sulphuretted and carbonated, ammonia and its carbonate, and the hydro sulphate, besides the carbonic acid and free nitrogen given off by respiration; and, from the inhalation of these compound gases, heated as such an atmosphere necessarily is by the congregating of animals, we have frequently inflammation and other diseases of those all-important organs, the lungs, set up, which, from the debility induced, is followed by farcy and glanders, and this more especially, should the predisposing causes of hard work and bad food co-exist. Or we have ophthalmia, both local and constitutional, engendered; and often that insidious but too frequently fatal disease, phthisis pulmonaria.

The conversion of oxygen into carbonic acid, plain and obvious as the fact itself is, and all-important as it also is to the animal economy, has, unfortunately, awakened much difference of opinion among philosophers as to the manner in which it is brought about. Doubtless the change is effected through the medium of the blood; and the older chemists taught that the venous blood, being returned to the lungs recharged with carbon, this united in the lungs with the oxygen of the air, and was expelled as carbonic acid gas. This theory, simple and explanatory as it really is, unfortunately involved some insurmountable objections; and it at length gave way to that of absorption of oxygen by the blood in its transit through the lungs and the gradual conversion of it into the compound gas—carbonic acid—during the circulation. Yet there was still much that remained inexplicable until Liebig advanced the beautiful theory of the iron in the hæmatism being the carrier of the oxygen. Thus this metal, it was taught by him, in arterial blood existed in the state of peroxide of iron; but as it yielded up its oxygen it generally became converted into the carbonate or protoxide, and, as such, it was said to be found in the venous blood, when in its passage through the lungs, by endosmosis, a displacement of the carbonic acid by the oxygen of the air took place, and thus the necessary change becomes effected.

Unfortunately, Liebig himself now seems to doubt the validity of this theory, for he makes the phosphate of soda meet with in the blood the carrier of the carbonic acid of the system. "There is," he says, in his lately published work on the "Chemistry of Food," "no known salt, the chemical characters of which approach more closely to those of the serum of blood, than the phosphate of soda; there is none more fitted for the absorption and entire removal from the organism of carbonic acid." So that the alteration in color which the blood undergoes in its conversion from venous to arterial is not so much dependent on the iron it contains, as on the saline matters which react on the hæmatism.

[London Far. Magazine.]

CURIOUS MODE OF MAKING BUTTER. If I want butter only for my own breakfast, I lay a sheet of blotting paper upon a plate, and pour the cream upon it. In a short time the milk filters through, and the butter is formed. If I wish to expedite the operation, I turn the paper over gently upon the cream, and keep it in contact for a few moments, and then press upon it, and the butter is formed in less than two minutes. If you submit it to severe pressure by a screw press, it becomes as hard as when frozen. I cannot think but the simplicity of this mode of proceeding would be universally adopted, if any better material than blotting paper could be thought of for the filter—the paper adhering too firmly to the butter, and the finest muslin admitting the passage of the cream. [London Chronicle.]

SHOOTING HORSES. At a meeting of the Royal Agricultural Society of England, some time since, Professor Sewall remarked that he had found old horses shod with a layer of leather, forming an artificial sole, between the shoe and the hoof, recover from the severe affections causing injury to the hoof; such, for instance, as contractions, brittleness, and cracks, or even disease of the foot itself, as thrushes, canker, corns, &c. and perfectly restore its original elasticity and firmness. The mode in question had been practiced by Prof. Sewall for the last thirty years.

HINTS TO LADIES. Stair carpets should never be put down without having a slip of paper put under them, at and over the edge of every stair, which is the part where they first wear out, in order to lessen the friction of the carpets against the boards beneath. The slips should be within an inch or two as long as the carpet is wide, and about four or five inches in breadth, so as to lie at a distance from each stair. This simple plan, easy of execution, will, we know, preserve a stair carpet half as long again as it would last without the slips of paper. [N. Y. Farmer.]

COURT HOUSE. At the special town meeting in this place, on Friday last, it was unanimously voted to give to the proposed new court, for fifteen years, the use of the Town Hall for a Court House, jury rooms, &c., if Waterville should be designated as the shire town. [Eastern Mail.]

THE POTATO ROT. The Newburyport Herald states that the potato rot has made its appearance in that vicinity. The Herald says its advent is earlier this year than last, and thus far with greater virulence.

